UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/975,286	10/10/2001	Christopher Peiffer	1014-152US01	9849

7590	10/04/2005

Kent J. Sieffert
Shumaker & Sieffert, P.A.
Suite 105
8425 Seasons Parkway
St. Paul, MN 55125

EXAMINER
PATEL, HARESH N

ART UNIT	PAPER NUMBER
2154	

DATE MAILED: 10/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS,
WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>10 October 2001</u>.

2a)☐ This action is **FINAL.**   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-26</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-26</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>10 October 2001</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

1.   Claims 1-26 are presented for examination.

Specification

2.   The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The present title is not sufficient for proper classification of the claimed subject matter.

The following title is suggested: "Performing case-insensitive matching on header over networks to reduce latency".

3.   The specification is objected to because it contains hyperlinks (lines 8-9, page 8). Appropriate action is required.

Information Disclosure Statement

4.   Applicant is requested to submit copies of the prior art references mentioned in the disclosure using form PTO-1449 for consideration.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

5.   Claims 3, 14, 15, 20, 25, are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 3, 20, recite the limitations, "the same number of characters". There is insufficient antecedent basis for this limitation in the claim.

Claims 14, 15 recite the limitations, "each of the segments". There is insufficient antecedent basis for this limitation in the claim.

Claim 25, recites the limitations, "the binary representations". There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

6.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7.   Claims 1-3, 5, 6, 8, 9, 14-17, 19-20 and 22-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Branstad et al., 6,842,860, Networks Associates Technology (Hereinafter Branstad) in view of HTTP 1.1, Fielding et al., June 28 2001, pages 1-6, Chapter 3 Protocol Parameters", pages 1-10, Chapter 4 HTTP Message, pages 1-4, Chapter 14 Header Field Definitions, pages 1-37 (Hereinafter Fielding).

8.   As per claim 1, Branstad discloses a computer-implemented method for comparing (e.g., col., 21, lines 21 – 27, col., 3, lines 35 – 48) an unknown string (e.g.,

message content with or without errors, figure 12, col., 3, lines 9 - 39) to a predefined

string (e.g., predefined tag, col., 3, lines 26 – 38), the method comprising:

identifying a predefined string (e.g., predefined tag, col., 3, lines 26 – 38);

identifying an unknown string for comparison with the predefined string (e.g.,

col., 3, lines 35 – 48);

performing a bitwise exclusive OR operation (e.g., col., 22, lines 2 – 21) on at

least a segment of the unknown string (e.g., col., 19, lines 19 – 34) and at least a segment

of the predefined string (e.g., col., 20, lines 18 – 27) ; and

identifying string match based on the exclusive OR operation (e.g., col., 22, lines

2 – 21).

However, Branstad does not specifically mention about usage of strings having an

ASCII binary representation and string being a case-insensitive string.

Fielding discloses well-known usage of strings having an ASCII (e.g., section 3.4,

page 4) binary representation (e.g., section 14.15, page 16) and string being a case-

insensitive string (e.g., section 3.4, page 4).

It would have been obvious to one of ordinary skill in the art at the time the

invention was made to combine the teachings of Branstad with the teachings of Fielding

in order to facilitate usage of strings having an ASCII binary representation and string

being a case-insensitive string because the ASCII binary representation would help

support communicating information among two entities using the ASCII character set.

The case-insensitive implementation would support usage of characters regardless of

their uppercase or lowercase.

9.   As per claim 2, Branstad and Fielding disclose the claimed limitations as rejected above. Branstad also discloses the following:

identifying a segment of the predefined string (e.g., col., 20, lines 18 – 27) and identifying a segment of the unknown string (e.g., col., 19, lines 19 – 34) for comparison (e.g., col., 3, lines 35 – 48) with the predefined string (e.g., col., 20, lines 18 – 27).

10.   As per claims 3, 20, Branstad and Fielding disclose the claimed limitations as rejected above. Branstad also discloses the following:

the segment of the predefined string and the segment of the unknown string contain the same number of characters (e.g., col., 3, lines 35 – 48).

11.   As per claims 5 and 6, Branstad and Fielding disclose the claimed limitations as rejected above. Fielding also discloses usage of a case-insensitive (e.g., section 3.4, page 4) segment match (e.g., section 14.16, page 17) and a predefined flag (e.g., section 14.2, page 2).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Branstad with the teachings of Fielding in order to facilitate usage of a case-insensitive segment match and a predefined flag because the segment and the predetermined flag would help support communicating information among two entities using the ASCII character set. The case-insensitive implementation would support usage of characters regardless of their uppercase or lowercase.

12.   As per claim 8, Branstad and Fielding disclose the claimed limitations as rejected above. Branstad also discloses usage identifying a subsequent segment of the predefined string (e.g., col., 20, lines 18 – 27) and a subsequent segment of the unknown string (e.g., col., 19, lines 19 – 34) for comparison (e.g., col., 3, lines 35 – 48).

13.   As per claim 9, Branstad and Fielding disclose the claimed limitations as rejected above. Fielding also discloses usage a result equal to a predefined flag (e.g., section 14.2, page 2).

        It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Branstad with the teachings of Fielding in order to facilitate usage of a result equal to a predefined flag because the result would provide support communicating information among two entities using the ASCII character set.

14.   As per claims 14-17, 19, Branstad and Fielding disclose the claimed limitations as rejected above. Fielding also discloses each of the segments each include one character (e.g., section 14.2, page 2) / four characters (e.g., section 14.19, page 19, section 14.23, page 21), the unknown string including an HTTP header field (e.g., section, 14.1, page 1), the predefined string is from a table of predetermined HTTP header fields (e.g., section 14, page 1, section 14.1, page 1, section 14.2, page 2), identifying the length of strings (e.g., section 14.13, page 15).

        It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Branstad with the teachings of Fielding

in order to facilitate each of the segments each include one character / four characters, the unknown string including an HTTP header field, the predefined string is from a table of predetermined HTTP header fields and identifying the length of strings because the character / four characters, HTTP header field, predetermined HTTP header field and the length of strings would enhance communicating information among two entities using the ASCII character set. The case-insensitive implementation would support usage of characters regardless of their uppercase or lowercase.

15.   As per claims 22 and 23, Branstad and Fielding disclose the claimed limitations as rejected above. Fielding also discloses determining if characters of the strings are within a predefined ASCII range (e.g., section 14.24, page 22, section 14.27, page 25), characters not within the predefined ASCII range causes to yield a negative string match (e.g., section 14.26, page 24).

16.   It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Branstad with the teachings of Fielding in order to facilitate determining if characters of the strings are within a predefined ASCII range and characters not within the predefined ASCII range causes to yield a negative string match because usage of the determination of characters within a predefined ASCII range and the negative string would enhance communicating information among two entities using the ASCII character set. The case-insensitive implementation would support usage of characters regardless of their uppercase or lowercase.

17.   As per claim 24, Branstad and Fielding disclose the claimed limitations as rejected above. Branstad also discloses the following:

use in a computer network (e.g., col., 1, lines 36 – 54, col., 3, lines 21 - 34) and the corresponding characters (e.g., col., 10, lines 9 – 34).

18.   As per claim 25, Branstad and Fielding disclose the claimed limitations as rejected above. Branstad also discloses the following:

a computer networking device for improving data transfer via a computer network (e.g., col., 1, lines 36 – 54, col., 3, lines 21 - 34).

19.   As per claim 26, Branstad and Fielding disclose the claimed limitations as rejected above. Branstad also discloses the following:

an article of manufacture comprising a storage medium having a plurality of machine-readable instructions executed by a computing system (e.g., col., 1, lines 36 – 54, col., 3, lines 21 - 34).

20.   Claims 4, 7, 10-13 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Branstad and Fielding in view of "Official Notice".

21.   As per claim 4, Branstad and Fielding disclose the claimed limitations as rejected above. Branstad also discloses left-shifting the content of the segments if the segments contain less than predetermined number of string contents (e.g., col., 22, lines 3 – 39).

However, Branstad and Fielding do not specifically mention about shifting when less than four characters exist.

"Official Notice" is taken that both the concept and advantages of providing usage of shifting when less than four characters exist is well known and expected in the art. For example, Thinkage GCOS8 SS C Reference Manual, pages 1-71, 1996, discloses usage of these limitations, e.g., section, 2.7, page 6, section, 4.7, page 34, section, 4.12, page 36.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to include the well-known concept of shifting when less than four characters with the teachings of Branstad and Fielding in order to facilitate shifting when less than four characters exist because the shifting would enhance supporting decoding information. The compared information would be used for utilizing the string information.

22.   As per claims 7 and 13, Branstad and Fielding disclose the claimed limitations as rejected above. However, Branstad and Fielding do not specifically mention about predetermined value 0x20202020. For example, Abgrall et al., 2003/0037237, discloses the concept of using predetermined value 0x20202020 (0x20 for each byte), e.g., paragraphs 323 and 324.

"Official Notice" is taken that both the concept and advantages of providing predetermined value 0x20202020 is well known and expected in the art. It would have been obvious to one of ordinary skill in the art at the time the invention was made to include the well-known concept of providing predetermined value 0x20202020 with the teachings of Branstad and Fielding in order to facilitate using value 0x20202020 (as the predetermined value 0x20202020 represents four blank characters) would enhance

supporting decoding information. The compared information would be used for utilizing the string information.

23.   As per claim 12, Branstad and Fielding disclose the claimed limitations as rejected above. However, Branstad and Fielding do not specifically mention about predetermined value 0x20.

"Official Notice" is taken that both the concept and advantages of providing predetermined value 0x20 is well known and expected in the art. For example, Abgrall et al., 2003/0037237, discloses the concept of using predetermined value 0x20, e.g., paragraphs 323 and 324.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to include the well-known concept of providing predetermined value 0x20 with the teachings of Branstad and Fielding in order to facilitate using value 0x20 (as the predetermined value 0x20 represents blank character) would enhance supporting decoding information. The compared information would be used for utilizing the string information.

24.   As per claims 10, 18, Branstad and Fielding disclose the claimed limitations as rejected above. However, Branstad and Fielding do not specifically mention about the result is operated on in another bitwise operation.

"Official Notice" is taken that both the concept and advantages of providing the result is operated on in another bitwise operation is well known and expected in the art.

For example, Kontio et al., 2005/0004875, January 6, 2005, discloses these limitations, e.g., paragraphs 54 and 55.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to include the well-known concept of providing the result is operated on in another bitwise operation with the teachings of Branstad and Fielding in order to facilitate further operating on the result because the another bitwise operation would enhance supporting decoding information. The compared information would be used for utilizing the string information.

25.   As per claim 11, Branstad and Fielding disclose the claimed limitations as rejected above. However, Branstad and Fielding do not specifically mention about predetermined value 0.

"Official Notice" is taken that both the concept and advantages of providing predetermined value 0 is well known and expected in the art. For example, Abgrall et al., 2003/0037237, discloses the concept of using predetermined value 0, e.g., paragraphs 323 and 324.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to include the well-known concept of providing predetermined value 0 with the teachings of Branstad and Fielding in order to facilitate shifting using value 0 (as the predetermined value 0 represents null value) would enhance supporting decoding information. The compared information would be used for utilizing the string information.

26. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Branstad and Fielding in view of Slater et al., 6,654,796, Cisco (Hereinafter Slater)

27. As per claim 21, Branstad and Fielding disclose the claimed limitations as rejected above. However, Branstad and Fielding do not specifically mention about WAN.

Slater discloses the network being WAN (e.g., col., 1, lines 55 – 67, col.,9, lines 42 – 65).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Branstad and Fielding with the teachings of Slater in order to facilitate the network being WAN because the WAN would support communicating string information from one entity to another entity. The entity over the WAN would support exclusive OR operation.

Conclusion

28. The prior art made of record (forms PTO-892 and applicant provided IDS cited arts) and not relied upon is considered pertinent to applicant's disclosure. For example, Narin, 2002/0091755 discloses usage of number of predefined headers along with supplemental headers. Brown, 5,740,361, discloses string bits / header authentication using HTTP protocol and headers like Accept-Encoding, WWW-Authenticate by XORing several times and using, for example, one-character string "/" for "http://www.foo.com" string over the Internet. Mitzenmacher et al., 5,953,503, discloses HTTP headers with ASCII characters with preset dictionaries.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Haresh Patel whose telephone number is (571) 272-3973.

The examiner can normally be reached on Monday, Tuesday, Thursday and Friday from 10:00 am to 8:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Follansbee can be reached on (571) 272-3964. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Haresh Patel

September 30, 2005

JOHN FOLLANSBEE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100